

The relationship between pregnancy planning and breastfeeding duration

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Abstract

This exploratory study, using a convenience sample of 102 primiparous women in New Zealand, examined the relationship between pregnancy planning and duration of breastfeeding. These women, who had chosen to exclusively breastfeed their infants, responded to a two-part survey: Part I self administered on the day of discharge from hospital; Part II completed during a telephone interview at 6 weeks postpartum. **Results:** No relationship was found between planning of pregnancy and duration of exclusive breastfeeding. At 6 weeks postpartum, 66 (65%) were exclusively breastfeeding and 34 (35%) were not. Women who had completed 12th grade were significantly more likely to exclusively breastfeed at 6 weeks postpartum than women who had not completed high school ($\chi^2 = 5.38, p = 0.02$). **Conclusions:** Although a relationship between planning of pregnancy and breastfeeding has been found in previ-

ous studies in the United States, it was not found in this small and potentially unrepresentative group of breastfeeding women in one New Zealand setting. One reason may have been that all the women in this study had already chosen to breastfeed. The relationship between level of education and exclusive breastfeeding at 6 weeks is not well recognised. Further research is recommended to address the issue of increased breastfeeding support for women with lower levels of education.

Introduction

An influential article published by Saadeh and Akre in 1996 asserted that:

"breast-feeding is as important to the health of children in industrialized countries as it is to children in developing countries. Scientific evidence demonstrates the incomparable benefits of breast-feeding in all environments, including highly sophisticated industrialized countries. Morbidity (disease) and mortality (death) are always higher among artificially-fed than among breast-fed infants" (p.156).

This evidence was the reason that the World Health Organization (WHO) and the United Nations International Children's Fund (UNICEF) established the Baby Friendly Hospital Initiative (BFHI) in 1991. The goal of the BFHI is to increase breastfeeding rates globally through maternity practices that encourage and promote breastfeeding (UNICEF, 1999).

Given the numerous, well documented health benefits of breastfeeding for both women and their infants (Beral, Bull, Doll, Peto & Reeves, 2001; Newman, 1995; Newman, 1999; Riordan, & Auerbach, 1999; Saadeh & Akre, 1996), it is important that midwives are aware of those factors that may interfere with a woman's decision to breastfeed. In the United States, the Committee on Unintended Pregnancy (1995) established that an association exists between a woman's intention to become pregnant and her health-related behaviours.

The relationship between unplanned pregnancy and breastfeeding behaviours has received attention in two large studies that were conducted in

the United States (Dye, Wojtowycz, Aubrey, Quade & Kilburn, 1997; Kost, Landry & Darroch, 1998). Dye et al. obtained data on 27,700 of the 33,735 women who delivered live babies in central New York State between January 1, 1995, and July 31, 1996. Kost et al. obtained data from 11,670 women in 1998. Results of both studies indicated that unplanned pregnancies sig-

nificantly reduced the probability that women would breastfeed their newborns. However, these studies addressed only the intent to breastfeed and not ongoing breastfeeding behaviours. The purpose of the New Zealand study was to explore this question further. Specifically,

this exploratory study focused on whether planning of pregnancy also affects the duration of breastfeeding in women who have already made the choice to breastfeed.

Methodology

Sample and setting

The study design was a two-part survey administered to a convenience sample of 105 primiparous women who experienced a normal vaginal birth and who intended to breastfeed. The appropriate regional ethics committee provided ethical approval for the study. The women were approached and invited to participate by a midwife researcher in the postnatal ward of a New Zealand hospital in June, July and August of 2001. All women agreed to participate and 102 completed both parts of the study. The women were aged between 16 and 40 with 73% Pakeha, 13 % Māori, 8% Pacific Island, and 6% of other ethnic background. Ethnicity was self described by each participant. This sample is dissimilar to the ethnicity of the total population of NZ women as described in the Ministry of Health *Report on Maternity:1999*, where 58% were Pakeha, 19% Māori, 10.1% Pacific Island, 5.9% Asian, and 4.6% other. This may limit the generalisability of the study findings.

Methods

The first survey was completed in the hospital upon day of discharge. This consisted of a brief

More studies need to be done to address issues related to variables that increase exclusive and successful breastfeeding and could explore what women of higher education levels have in place that might be provided for women of lower education levels.

questionnaire, which took approximately 5 minutes to complete. Women were asked about use of birth control prior to this pregnancy, breastfeeding intent, level of education, and household income. The researcher then telephoned each woman 6 weeks later. They were asked whether they had continued to breastfeed and when the first, if any, non-breastmilk feeding was given.

Data analysis and results

For analysis, women were identified as two groups: those who planned the pregnancy and those who did not. The results were analysed using the Chi-squared test with significance set at $p=0.05$ to determine relationships between planned or unplanned pregnancies and the duration of exclusive breastfeeding status by 6 weeks postpartum. The definition of exclusive breastfeeding in this context was: currently providing no food other than breastmilk. Of the 102 women breastfeeding on discharge from the hospital, 66 (65%) were exclusively breastfeeding at 6 weeks, and 34 (35%)

Table 2: Level of education, planning of pregnancy and the rate of exclusive breastfeeding at 6 weeks

Level of education	Total number of women	Planned pregnancy	Unplanned pregnancy	Exclusively breastfeeding at 6 weeks
> 12 th Grade	64	30 (47%)	32 (53%)	48 (75%)
≤12 th Grade	38	18 (47%)	20 (53%)	20 (53%)

statistically significant relationship between these factors and breastfeeding duration (see Table 1). Range of income was \$7900 to \$230,000 and above per annum. The intent was to examine the level of income to determine whether any significant relationships existed in the planning of pregnancy or breastfeeding behaviours relative to income. However, only eight women fell into the less than \$20,000 category, making any statistical analysis questionable. From the small sample in this study it appears women with a higher income were more likely to plan their pregnancy.

Discussion

This exploratory study examined the relationship between planned pregnancies and breastfeeding incidence and duration in primiparous women who experienced normal vaginal birth. Although previous studies did find a relationship between planning of pregnancy and breastfeeding, this was not the case in this study.

There are several possible explanations for the differences in this study. First, this study addressed only women who had already made the decision to breastfeed. According to Heath et al. (2002, p.937) “...*Intention to breastfeed increased the likelihood of successful breastfeeding initiation*”. Also, the previous studies (Dye et al., 1997; Kost et al., 1998) took place in the United States. Findings of these studies may not be generalisable to the population in New Zealand. Further, the culture in which this study took place is very different from the culture in the studies cited above, both in diversity of population and the obstetric setting. Midwives were the main providers of care in New Zealand, whereas physicians tend to take that role in the United States. This might create a difference. For example, midwives may stress breastfeeding more during the pregnancy, and the New Zealand culture may expect women to breastfeed. This is not necessarily the attitude that prevails in the United States. A major limitation of this study is the small sample size and the sampling technique which may have influenced both the actual findings as well as their generalisability.

In the second phase of this study, during the follow-up phone call, in which two questions related to breastfeeding were asked, the majority of the women provided considerable detail about their 6 week breastfeeding experience. Many of the women seemed to feel comfortable on the phone, perhaps because their confidentiality was protected

Table 1: Level of income and planning of pregnancy

Income level	Total number of women	Number (%) who planned their pregnancy
\$5000-\$19,999	8	1 (13%)
\$20,000-\$39,999	27	12 (44%)
\$40,000-\$59,999	18	11 (61%)
\$60,000-\$79,999	13	8 (62%)
≥\$80,000	28	19 (69%)
No information on income	10	4 (40%)

were not. A total of 100 women provided information regarding whether the pregnancy was planned. Of the 57 women who planned to become pregnant, 39 were exclusively breastfeeding at 6 weeks, and 18 were not. Of the 43 women who did not plan their pregnancies, 27 were exclusively breastfeeding at 6 weeks, and 16 were not. Two women did not respond to the question whether the pregnancy was planned. This difference was not significant ($X^2=0.556$; $p = 0.55$). Therefore, in this population, planning of pregnancy was not associated with duration of exclusive breastfeeding.

Data relating to socio-economic status (according to level of income) and level of education were also analysed to determine whether there was a

Level of education was also examined to determine whether any significant relationships existed in the planning of pregnancy or breastfeeding behaviours relative to education (see Table 2). The sample was divided into two groups, those whose level of education was greater than the 12th grade (completed high school), and those whose level of education was equal to or less than the 12th grade. The difference between the two groups in terms of planning their pregnancy was not significant ($X^2 = 0.92$, $p = 0.92$). However, women whose education was greater than 12th grade were significantly more likely to exclusively breastfeed at 6 weeks postpartum than women whose education was equal to or less than 12th grade ($X^2 = 5.368$, $p = 0.02$).

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and the interviewer was perceived as "safe". They discussed:

- some problems that they were encountering
- the joys of breastfeeding
- the health information given to them by the hospital and their maternity care provider
- their new role as parent
- the evolving relationship with their spouse/significant other and family members
- their commitment to breastfeeding, even when it seemed to them that the odds were against succeeding.

Women also talked about the difficulties that they had initially encountered when breastfeeding, their occasional use of artificial feeds and their pride that they were now exclusively breastfeeding. They also raised the issue of altered sleep patterns. Many mothers felt that they had not been prepared for how often their sleep would be interrupted in order to breastfeed. At the end of the phone call, participants thanked the researcher for her concern and for taking the time to listen to their issues and support their decisions.

The women who were artificially feeding their babies revealed that they had regarded themselves, to a degree, as failures. The researcher fully supported each woman's decision and reinforced that the modality of feeding the baby was the woman's own choice; in this case, what was best for the woman was best for the baby. This was much appreciated by the women. The desire these women had to talk about their experiences is worth consideration for future research and may serve as a reminder for midwives and nurses to listen to the stories of women. Recent studies provide support for such an approach. Colin and Scott (2002, p.13) note that "Most mothers experience some problems during breastfeeding, especially in the early stages. Proper advice and management is required to ensure that the problems do not lead to cessation of breastfeeding." Gill (2001, p.401) advises that "Breastfeeding mothers expected the nurses to support their feeding efforts by providing information, encouragement, and interpersonal support... Health care providers can help breastfeeding mothers, but the support offered must be the kind that mothers want." The desire of the women in this study to talk about their experiences seems to be a reflection of the kind of support they expect from midwives and nurses.

Although 55% of the women in this study wanted to become pregnant, a significant proportion (45%) were not planning on a pregnancy. Only 21% of the entire group of participants in this study was using a family planning method when pregnancy occurred, and it is not known if the pregnancy resulted from a user or a product failure. Also the method of family planning utilized is unknown. Of the 45% of the women who were not planning on a pregnancy, many causes were cited for their pregnancies. The reasons why women continue to experience unplanned pregnancies may be complex and merit further investigation. It may be simplistic to suggest that contraceptive information is either not adequately provided nor clearly understood.

Conclusion

This study notes that level of education, rather than of income, had a significant relationship to breastfeeding behaviours. According to Dennis (2001), level of education has not been identified as a consistent predictor of breastfeeding behaviour in the literature. To increase the numbers of less educated women who continue to exclusively breastfeed, interventions should address these women and might include support for breastfeeding both during and after the pregnancy. More studies need to be done to address issues related to variables that increase exclusive and successful breastfeeding and could explore what women of higher education levels have in place that might be provided for women of lower education levels. Future research should also look at both the choice to breastfeed and the duration of exclusive breastfeeding and should address potential interventions for maintaining exclusive breastfeeding.

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